



**CONFORMANCE TEST REPORT
FOR
FCC 47 CFR, Part 15 Subpart C**

Report No.: 14-04-MAS-125-03

Client: FUJITSU TEN LIMITED
Product: Car Navigation
Model: FT0044C
FCC ID: BABFT0044C

Manufacturer/supplier: FUJITSU TEN LIMITED
Date test item received: 2014/04/16
Date test campaign completed: 2014/06/11
Date of issue: 2014/06/11




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Total number of pages of this test report: 39 pages

Total number of pages of photos: External photos 2 pages

Internal photos 3 pages

Setup photos 1 pages

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Manufacturer : FUJITSU TEN LIMITED
Address : 2-28, Goshō-dori, 1-chome, Hyogo-ku, Kobe 652-8510 Japan
EUT : Car Navigation
Trade name : ----
Model No. : FT0044C
Power Source : 12Vdc battery
Regulations applied : FCC 47 CFR, Part 15 Subpart C

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1 GENERAL INFORMATION

1.1 Product Description

- a) Type of EUT : Car Navigation
 b) Trade Name : ----
 c) Model No. : FT0044C
 d) FCC ID : BABFT0044C
 ※ For FCC application:

The changed points from the original type is described below:

1. External Case Design

2. Antenna

	Original type	Added type
Antenna Model Number (Bluetooth)	ANT1491-16A/U-BT	ANT1521-A4.5-T1/U-241-A
Antenna Model Number (WLAN)	ANT1519-A4.5-T0/U-42-W	ANT1521-A4.5-T1/U-167-W
Antenna Gain (Bluetooth)	0.63dBi (Peak)	1.32dBi (Peak)
Antenna Gain (WLAN)	2.34dBi (Peak)	-0.29dBi (Peak)

This test report confirms the new EUT will conform to the rule of FCC.

1.2 Characteristics of Device

The EUT is a Car Navigation. It conforms to the IEEE 802.11b/g/n protocol and operates in the unlicensed ISM Band at 2.4 GHz.

RF chain	1T1R
Frequency Range	IEEE 802.11b/g, 802.11gn HT20: 2412MHz~2462MHz
Channel Spacing	IEEE 802.11b/g, 802.11gn HT20: 5MHz
Channel Number	IEEE 802.11b/g, 802.11gn HT20:11 Channels
Transmit Data Rate	IEEE 802.11b: 11, 5.5, 2, 1 Mbps IEEE 802.11g: 54, 48, 36, 24, 18, 12, 11, 9, 6 Mbps IEEE 802.11gn HT20: 65, 58.5, 52, 39, 26, 19.5, 13, 6.5Mbps
Type of Modulation	IEEE 802.11b: DSSS (CCK, DQPSK, DBPSK) IEEE 802.11g: OFDM (64QAM, 16QAM, QPSK, BPSK) IEEE 802.11gn HT20: OFDM (64QAM, 16QAM, QPSK, BPSK)

1.3 Test Methodology

All testing were performed according to the procedures in ANSI C63.10 (2009) and FCC CFR 47 Part 2 and Part 15 and KDB 558074 D01 v02.

1.4 Test Facility

The semi-anechoic chamber and conducted measurement facility used to collect the radiated and conducted data are located inside the Building at No.8, Lane 29, Wen-ming Road, Lo-shan Tsun, Kweishan Hsiang, Taoyuan, Taiwan, R.O.C.

This site has been accreditation as a FCC filing site.

1.5 Test Summary

Requirement	FCC Paragraph #	Test Pass
Antenna Requirement	15.203	<input checked="" type="checkbox"/>
Conducted Emission	15.207	N/A
Emission Bandwidth	15.247 (a)(2)	N/A
Output Power Requirement	15.247 (b)	<input checked="" type="checkbox"/>
Power Density Requirement	15.247 (e)	N/A
Spurious Emissions	15.247 (d)	N/A
Radiated Emission	15.247 (d)	<input checked="" type="checkbox"/>

Note: The test setup and measurement method for conductive output power measurements shown in this test report is different to the “Peak Output Power” test. Certain measurement uncertainty of peak power may be expected with the use of different power detection method or measuring equipment. Therefore, the conductive output power measurement results provided in this test report may be different to the specification of the device under test.

2 PROVISIONS APPLICABLE

2.1 Definition

Unintentional radiator:

A device that intentionally generates and radio frequency energy for use within the device, or that sends radio frequency signals by conduction to associated equipment via connecting wiring, but which is not intended to emit RF energy by radiation or induction.

Class A Digital Device:

A digital device which is marketed for use in commercial or business environment; exclusive of a device which is market for use by the general public, or which is intended to be used in the home.

Class B Digital Device :

A digital device which is marketed for use in a residential environment notwithstanding use in a commercial, business or industrial environment. Example of such devices that are marketed for the general public.

Note : A manufacturer may also qualify a device intended to be marketed in a commercial, business, or industrial environment as a Class B digital device, and in fact is encouraged to do so, provided the device complies with the technical specifications for a Class B Digital Device. In the event that a particular type of device has been found to repeatedly cause harmful interference to radio communications, the Commission may classify such a digital device as a Class B Digital Device, Regardless of its intended use.

Intentional radiator:

A device that intentionally generates and emits radio frequency energy by radiation or induction.

2.2 Requirement for Compliance

(1) Conducted Emission Requirement

For unintentional device, according to §15.107(a) Line Conducted Emission Limits is as following:

Frequency MHz	Quasi Peak dB μ V	Average dB μ V
0.15 - 0.5	66-56*	56-46*
0.5 - 5.0	56	46
5.0 - 30.0	60	50

*Decreases with the logarithm of the frequency.

For intentional device, according to §15.207(a) Line Conducted Emission Limits is same as above table.

(2) Radiated Emission Requirement

For unintentional device, according to §15.109(a), except for Class A digital devices, the field strength of radiated emissions from unintentional radiators at a distance of 3 meters shall not exceed the following values:

Frequency MHz	Distance Meters	Radiated dB μ V/m	Radiated μ V/m
30 - 88	3	40.0	100
88 - 216	3	43.5	150
216 - 960	3	46.0	200
above 960	3	54.0	500

For intentional device, according to §15.209(a), the general requirement of field strength of radiated emissions from intentional radiators at a distance of 3 meters shall not exceed the above table.

(3) Antenna Requirement

For intentional device, according to §15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.

(4) Bandwidth Requirement

According to 15.247 (a)(2), systems using digital modulation techniques may operate in the 902 - 928 MHz, 2400 - 2483.5 MHz, and 5725 - 5850 MHz bands. The minimum 6 dB bandwidth shall be at least 500 kHz.

(5) Output Power Requirement

For systems using digital modulation , according to 15.247(b), the maximum peak output power of the intentional radiator shall not exceed 1 Watt. If transmitting antennas of directional gain greater than 6 dBi are used, the peak output power from the intentional radiator shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

(6) Spurious Emissions Measurement

According to 15.247 (d) , in any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement. Attenuation below the general limits specified in Section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a) (see Section 15.205(c)).

(7) Power Density Requirement

According to 15.247 (e) , for digitally modulated systems, the peak power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission..

2.3 Restricted Bands of Operation

Only spurious emissions are permitted in any of the frequency bands listed below :

MHz	MHz	MHz	GHz
0.090 - 0.110	16.42-16.423	399.9-410	4.5-5.25
0.495 - 0.505 **	16.69475 - 16.69525	608-614	5.35-5.46
2.1735 - 2.1905	16.80425 - 16.80475	960-1240	7.25-7.75
4.125-4.128	25.5-25.67	1300-1427	8.025-8.5
4.17725-4.17775	37.5-38.25	1435-1626.5	9.0-9.2
4.20725-4.20775	73-74.6	1645.5-1646.5	9.3-9.5
6.215-6.218	74.8-75.2	1660-1710	10.6-12.7
6.26775-6.26825	108-121.94	1718.8-1722.2	13.25-13.4
6.31175-6.31225	123-138	2200-2300	14.47-14.5
8.291-8.294	149.9-150.05	2310-2390	15.35-16.2
8.362-8.366	156.52475 - 156.52525	2483.5-2500	17.7-21.4
8.37625-8.38675	156.7-156.9	2655-2900	22.01-23.12
8.41425-8.41475	162.0125-167.17	3260-3267	23.6-24.0
12.29-12.293	167.72-173.2	3332-3339	31.2-31.8
12.51975-12.52025	240-285	3345.8-3358	36.43-36.5
12.57675-12.57725	322-335.4	3600-4400	Above 38.6
13.36-13.41			

** : Until February 1, 1999, this restricted band shall be 0.490-0.510 MHz

2.4 Labeling Requirement

The device shall bear the following statement in a conspicuous location on the device :

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

2.5 User Information

The users manual or instruction manual for an intentional or unintentional radiator shall caution the user that changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

For a Class B digital device or peripheral, the instructions furnished the user shall include the following or similar statement, placed in a prominent location in the text of the manual.

The Federal Communications Commission Radio Frequency Interference Statement includes the following paragraph.

This equipment has been tested and found to comply with the limits for a Class B Digital Device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instruction may cause harmful interference to radio communication. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.

- Increase the separation between the equipment and receiver.

- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

- Consult the dealer or an experienced radio / TV technician for help.

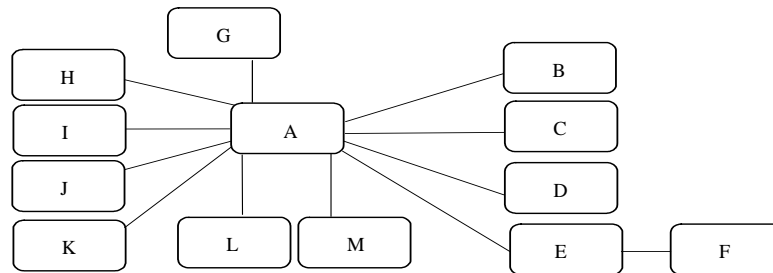
3. SYSTEM TEST CONFIGURATION

3.1 Devices for Tested System

No	Device	Manufacture	Model No.	Cable Description
A	* Car Navigation	FUJITSU TEN LIMITED	FT0044C	----
B	Steering Switch	N/A	N/A	3.7m*1 Unshielded Signal Line
C	Rear Camera	N/A	GP-KD5339RC	3.6m*1 Unshielded Signal Line
D	Microphone	N/A	N/A	3.6m*1 Unshielded Signal Line
E	USB Adapter	N/A	N/A	2.0m*1 Unshielded Signal Line
F	USB Dongle	Transcend	N/A	2.0m*1 Unshielded Signal Line
G	GPS Antenna	TOYOTA	86860-22090	4.5m*1 Unshielded Signal Line
H	Pole Antenna	N/A	N/A	3.5m*1 Unshielded Signal Line
I	Speaker	N/A	ECLIPSE	3.4m*1 Unshielded Signal Line
J	Speaker	N/A	ECLIPSE	3.4m*1 Unshielded Signal Line
K	Speaker	N/A	ECLIPSE	3.4m*1 Unshielded Signal Line
L	Speaker	N/A	ECLIPSE	3.4m*1 Unshielded Signal Line
M	DC Power Supply	GW	GPS-3030D	4.0m*1, Unshielded Power Line

Remark:

1. “*” means equipment under test.



2.

Test Software:	Tx Batch File		
Power setting:	Mode	Channel	Setting
	b	Low	N/A
		Mid	N/A
		High	N/A
	g	Low	N/A
		Mid	N/A
		High	N/A
	gn HT20	Low	N/A
		Mid	N/A
High		N/A	

3.2 Description of Test modes

3.2.1 IEEE 802.11b, 802.11g, 802.11gn HT20 mode:

There are three channels have been tested as following:

Channel	Frequency (MHz)
Low = 1	2412
Middle = 6	2437
High = 11	2462

IEEE 802.11b mode: 1 Mbps data rate is the worse case for full testing.

IEEE 802.11g mode: 6 Mbps data rate is the worse case for full testing.

IEEE 802.11gn HT20 mode: MCS0 6.5 Mbps data rate is the worse case for full testing.

3.2.2 Test Mode Description

3.2.2.1 Modulation Type

Test Mode	Modulation	Note
A	IEEE 802.11b	-
B	IEEE 802.11g	-
C	IEEE 802.11gn HT20 (note1)	-

Mode	IEEE 802.11b/g/gn HT20
Test Channel	Frequency (MHz)
Channel Low (L)	2412
Channel Mid (M)	2437
Channel High (H)	2462

3.2.2.2 Test Mode and Worse Case Determination

Item	Test Item	Test Mode	Test Frequency (MHz)
1	Conducted Emission	-	-
2	Emission Bandwidth	-	-
3	Output Power Requirement	A , B , C	L , M , H
4	Power Density Requirement	-	-
5	Spurious Emissions	-	-
6	Radiated Emission	A , B , C	L , M , H
6.1	Radiated Emission (below 1GHz)	C (note1)	M (Worse Case1)
6.2	Radiated Emission (above 1GHz)	A , B , C	L , M , H

note:

1. The worse case is determined as the modulation with highest output power.
2. The worse case is determined as the adaptor:1 with highest noise conducted emission. Choose that for final testing and record the result.

4 CONDUCTED EMISSION MEASUREMENT

This EUT is excused from investigation of conducted emission, for it is powered by battery only. According to §15.207 (d), measurements to demonstrate compliance with the conducted limits are not required for devices which only employ battery power for operation and which do not operate from the AC power lines or contain provisions for operation while connected to the AC power lines.

5 ANTENNA REQUIREMENT

5.1 Standard Applicable

For intentional device, according to §15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. And according to §15.247 (b), if transmitting antennas of directional gain greater than 6 dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

5.2 Antenna Construction and Directional Gain

The antennas is a Inverted-F antenna.

Antenna Type	Surface mounting antenna
Peak Antenna Gain	-0.29 dBi

The directional gain of antenna doesn't greater than 6 dBi, the power won't be reduced.

6 RADIATED EMISSION MEASUREMENT

6.1 Standard Applicable

For unintentional radiator, the radiated emission shall comply with §15.109(a).

For intentional radiators, according to §15.247 (a), operation under this provision is limited to frequency hopping and direct sequence spread spectrum, and the out band emission shall be comply with §15.247 (d)

6.2 Measurement Procedure

1. Setup the configuration per figure 1 and 2 for frequencies measured below and above 1 GHz respectively. Turn on EUT and make sure that it is in continuous operating function.
2. For emission frequencies measured below 1 GHz, a pre-scan is performed in a semi-anechoic chamber to determine the accurate frequencies of higher emissions and then each selected frequency is precisely measured. As the same purpose, for emission measured above 1 GHz, a pre-scan also be performed with a 1 meter measuring distance before final test.
3. For emission measured below and above 1 GHz, set the spectrum analyzer on a 120 kHz and 1 MHz resolution bandwidth respectively for each frequency measured in step 2.
4. The search antenna is to be raised and lowered over a range from 1 to 4 meters in horizontally polarized orientation. Position the highness when the highest value is indicated on spectrum analyzer, then change the orientation of EUT on test table over a range from 0 ° to 360 ° with a speed as slow as possible, and keep the azimuth that highest emission is indicated on the spectrum analyzer. Vary the antenna position again and record the highest value as a final

Figure 1 : Frequencies measured below 1 GHz configuration

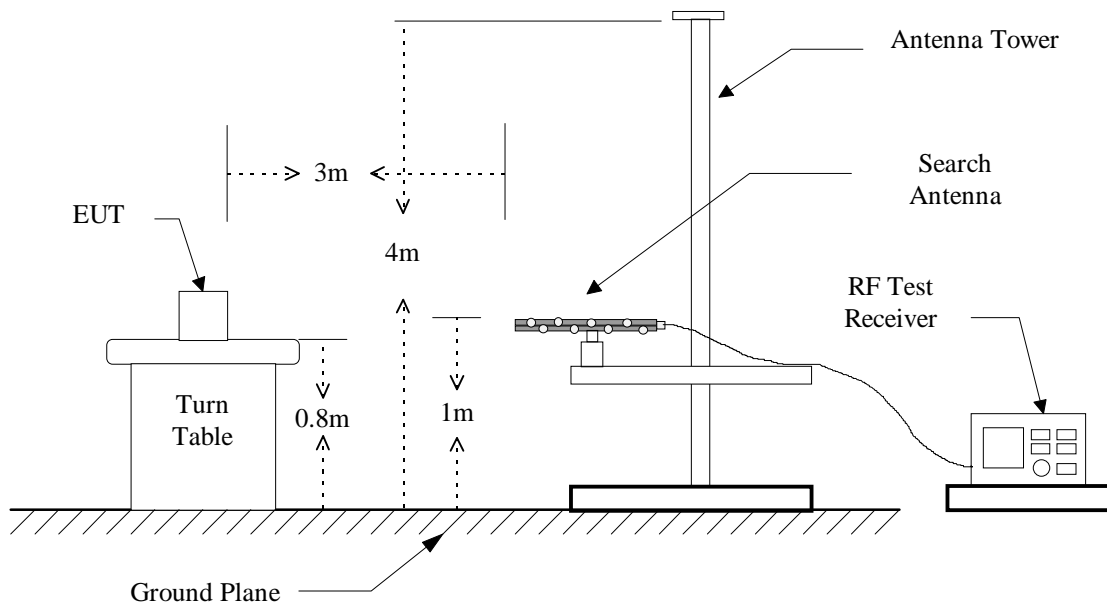
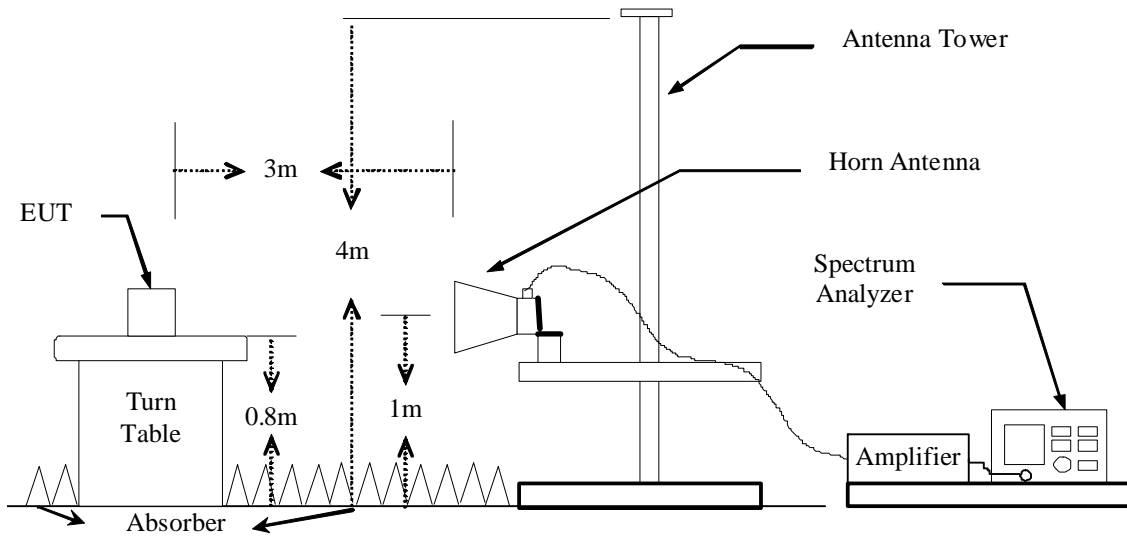


Figure 2 : Frequencies measured above 1 GHz configuration



6.3 Measuring Instrument

The following instrument are used for radiated emissions measurement :

Equipment	Manufacturer	Model No.
EMI Test Receiver	R&S	ESIB7
Spectrum Analyzer	Rohde & Schwarz	FSU46
Horn Antenna	EMCO	3115
BiLog Antenna	ETC	MCTD2786
Horn Antenna	EMCO	3116
Preamplifier	Hewlett-Packard	8449B
Loop Antenna	EMCO	6512
PRE-Amplifier	EMCI	PA303N

Measuring instrument setup in measured frequency band when specified detector function is used :

Frequency Band (MHz)	Instrument	Function	Resolution Bandwidth	Video Bandwidth
30 to 1000	RF Test Receiver	Quasi-Peak	120 kHz	300 kHz
	Spectrum Analyzer	Peak	120 kHz	300 kHz
Above 1000	Spectrum Analyzer	Peak	1 MHz	1 MHz
	Spectrum Analyzer	Average	1 MHz	10 Hz

6.4 Radiated Emission Data

6.4.1 Harmonic

6.4.1.1 Operation Mode: Tx

Test Date: Apr. 23, 2014Temperature: 22°CHumidity: 59%

6.4.1.1.1 IEEE 802.11b

a) Channel 1

Fundamental Frequency: 2412 MHz

Frequency (MHz)	Ant Pol	Reading (dBuV/m)@3m		Correct Factor (dB)	Result (dBuV/m)@3m		Limit (dBuV/m)@3m		Margin (worse) (dB)
		Peak	AVG		Peak	AVG	Peak	AVG	
4824.0000	H	54.9	51.9	-1.99	52.9	49.9	74.0	54.0	-4.1
4824.0000	V	57.2	53.6	-1.99	55.2	51.6	74.0	54.0	-2.4
7236.0000	H	---	---	0.97	---	---	74.0	54.0	---
7236.0000	V	---	---	0.97	---	---	74.0	54.0	---
9648.0000	H	---	---	2.55	---	---	74.0	54.0	---
9648.0000	V	50.2	44.7	2.55	52.8	47.3	74.0	54.0	-6.7
12060.0000	H	---	---	4.84	---	---	74.0	54.0	---
12060.0000	V	---	---	4.84	---	---	74.0	54.0	---
14472.0000	H	---	---	9.35	---	---	74.0	54.0	---
14472.0000	V	---	---	9.35	---	---	74.0	54.0	---

Note :

1. Item of margin shown in above table refer to average limit.
2. Remark “---” means that the emissions level is too low to be measured.
3. If the peak result is under the average limit, that is deemed to meet the average limit.
4. If there is only peak result, item “Margin” referred to “peak result – average limit”.
5. The radiation emissions have been measured to beyond the tenth harmonic of the fundamental frequency and show the significant frequencies, other means the value is too low to be detected.

b) Channel 6

Fundamental Frequency: 2437 MHz

Frequency (MHz)	Ant Pol H/V	Reading (dBuV/m)@3m		Correct Factor (dB)	Result (dBuV/m)@3m		Limit (dBuV/m)@3m		Margin (worse) (dB)
		Peak	AVG		Peak	AVG	Peak	AVG	
4874.0000	H	53.9	48.0	-1.88	52.0	46.1	74.0	54.0	-7.9
4874.0000	V	54.7	51.1	-1.88	52.8	49.2	74.0	54.0	-4.8
7311.0000	H	---	---	1.15	---	---	74.0	54.0	---
7311.0000	V	---	---	1.15	---	---	74.0	54.0	---
9748.0000	H	---	---	2.65	---	---	74.0	54.0	---
9748.0000	V	50.6	43.5	2.65	53.3	46.2	74.0	54.0	-7.8
12185.0000	H	---	---	4.91	---	---	74.0	54.0	---
12185.0000	V	---	---	4.91	---	---	74.0	54.0	---
14622.0000	H	---	---	8.68	---	---	74.0	54.0	---
14622.0000	V	---	---	8.68	---	---	74.0	54.0	---

Note :

1. Item of margin shown in above table refer to average limit.
2. Remark “---” means that the emissions level is too low to be measured.
3. If the peak result is under the average limit, that is deemed to meet the average limit.
4. If there is only peak result, item “Margin” referred to “peak result – average limit”.
5. The radiation emissions have been measured to beyond the tenth harmonic of the fundamental frequency and show the significant frequencies, other means the value is too low to be detected.

c) Channel 11

Fundamental Frequency: 2462 MHz

Frequency (MHz)	Ant Pol H/V	Reading (dBuV/m)@3m		Correct Factor (dB)	Result (dBuV/m)@3m		Limit (dBuV/m)@3m		Margin (worse) (dB)
		Peak	AVG		Peak	AVG	Peak	AVG	
4924.0000	H	51.7	46.1	-1.77	49.9	44.3	74.0	54.0	-9.7
4924.0000	V	54.2	50.8	-1.77	52.4	49.0	74.0	54.0	-5.0
7386.0000	H	---	---	1.33	---	---	74.0	54.0	---
7386.0000	V	---	---	1.33	---	---	74.0	54.0	---
9848.0000	H	---	---	2.75	---	---	74.0	54.0	---
9848.0000	V	---	---	2.75	---	---	74.0	54.0	---
12310.0000	H	---	---	4.99	---	---	74.0	54.0	---
12310.0000	V	---	---	4.99	---	---	74.0	54.0	---
14772.0000	H	---	---	7.93	---	---	74.0	54.0	---
14772.0000	V	---	---	7.93	---	---	74.0	54.0	---

Note :

1. Item of margin shown in above table refer to average limit.
2. Remark “---” means that the emissions level is too low to be measured.
3. If the peak result is under the average limit, that is deemed to meet the average limit.
4. If there is only peak result, item “Margin” referred to “peak result – average limit”.
5. The radiation emissions have been measured to beyond the tenth harmonic of the fundamental frequency and show the significant frequencies, other means the value is too low to be detected.

6.4.1.1.2 IEEE 802.11g

a) Channel 1

Fundamental Frequency: 2412 MHz

Frequency (MHz)	Ant Pol	Reading (dBuV/m)@3m		Correct Factor (dB)	Result (dBuV/m)@3m		Limit (dBuV/m)@3m		Margin (worse) (dB)
		Peak	AVG		Peak	AVG	Peak	AVG	
4824.0000	H	54.2	37.8	-1.99	52.2	35.8	74.0	54.0	-18.2
4824.0000	V	54.4	39.6	-1.99	52.4	37.6	74.0	54.0	-16.4
7236.0000	H	---	---	0.97	---	---	74.0	54.0	---
7236.0000	V	---	---	0.97	---	---	74.0	54.0	---
9648.0000	H	48.7	---	2.55	51.3	---	74.0	54.0	-2.7
9648.0000	V	48.9	---	2.55	51.5	---	74.0	54.0	-2.5
12060.0000	H	---	---	4.84	---	---	74.0	54.0	---
12060.0000	V	---	---	4.84	---	---	74.0	54.0	---
14472.0000	H	---	---	9.35	---	---	74.0	54.0	---
14472.0000	V	---	---	9.35	---	---	74.0	54.0	---

Note :

1. Item of margin shown in above table refer to average limit.
2. Remark “---” means that the emissions level is too low to be measured.
3. If the peak result is under the average limit, that is deemed to meet the average limit.
4. If there is only peak result, item “Margin” referred to “peak result – average limit”.
5. The radiation emissions have been measured to beyond the tenth harmonic of the fundamental frequency and show the significant frequencies, other means the value is too low to be detected.

b) Channel 6

Fundamental Frequency: 2437 MHz

Frequency (MHz)	Ant Pol H/V	Reading (dBuV/m)@3m		Correct Factor (dB)	Result (dBuV/m)@3m		Limit (dBuV/m)@3m		Margin (worse) (dB)
		Peak	AVG		Peak	AVG	Peak	AVG	
4874.0000	H	52.4	37.8	-1.88	50.5	35.9	74.0	54.0	-18.1
4874.0000	V	54.1	38.8	-1.88	52.2	36.9	74.0	54.0	-17.1
7311.0000	H	---	---	1.15	---	---	74.0	54.0	---
7311.0000	V	---	---	1.15	---	---	74.0	54.0	---
9748.0000	H	---	---	2.65	---	---	74.0	54.0	---
9748.0000	V	50.4	41.3	2.65	53.1	44.0	74.0	54.0	-10.0
12185.0000	H	---	---	4.91	---	---	74.0	54.0	---
12185.0000	V	---	---	4.91	---	---	74.0	54.0	---
14622.0000	H	---	---	8.68	---	---	74.0	54.0	---
14622.0000	V	---	---	8.68	---	---	74.0	54.0	---

Note :

1. Item of margin shown in above table refer to average limit.
2. Remark “---” means that the emissions level is too low to be measured.
3. If the peak result is under the average limit, that is deemed to meet the average limit.
4. If there is only peak result, item “Margin” referred to “peak result – average limit”.
5. The radiation emissions have been measured to beyond the tenth harmonic of the fundamental frequency and show the significant frequencies, other means the value is too low to be detected.

c) Channel 11

Fundamental Frequency: 2462 MHz

Frequency (MHz)	Ant Pol H/V	Reading (dBuV/m)@3m		Correct Factor (dB)	Result (dBuV/m)@3m		Limit (dBuV/m)@3m		Margin (worse) (dB)
		Peak	AVG		Peak	AVG	Peak	AVG	
4924.0000	H	52.3	36.4	-1.77	50.5	34.6	74.0	54.0	-19.4
4924.0000	V	55.3	38.6	-1.77	53.5	36.8	74.0	54.0	-17.2
7386.0000	H	---	---	1.33	---	---	74.0	54.0	---
7386.0000	V	---	---	1.33	---	---	74.0	54.0	---
9848.0000	H	---	---	2.75	---	---	74.0	54.0	---
9848.0000	V	---	---	2.75	---	---	74.0	54.0	---
12310.0000	H	---	---	4.99	---	---	74.0	54.0	---
12310.0000	V	---	---	4.99	---	---	74.0	54.0	---
14772.0000	H	---	---	7.93	---	---	74.0	54.0	---
14772.0000	V	---	---	7.93	---	---	74.0	54.0	---

Note :

1. Item of margin shown in above table refer to average limit.
2. Remark “---” means that the emissions level is too low to be measured.
3. If the peak result is under the average limit, that is deemed to meet the average limit.
4. If there is only peak result, item “Margin” referred to “peak result – average limit”.
5. The radiation emissions have been measured to beyond the tenth harmonic of the fundamental frequency and show the significant frequencies, other means the value is too low to be detected.

6.4.1.1.3 IEEE 802.11gn, HT20

a) Channel 1

Fundamental Frequency: 2412 MHz

Frequency (MHz)	Ant Pol	Reading (dBuV/m)@3m		Correct Factor (dB)	Result (dBuV/m)@3m		Limit (dBuV/m)@3m		Margin (worse) (dB)
		Peak	AVG		Peak	AVG	Peak	AVG	
4824.0000	H	54.0	38.2	-1.99	52.0	36.2	74.0	54.0	-17.8
4824.0000	V	55.4	40.4	-1.99	53.4	38.4	74.0	54.0	-15.6
7236.0000	H	---	---	0.97	---	---	74.0	54.0	---
7236.0000	V	---	---	0.97	---	---	74.0	54.0	---
9648.0000	H	---	---	2.55	---	---	74.0	54.0	---
9648.0000	V	49.2	---	2.55	51.8	---	74.0	54.0	-2.2
12060.0000	H	---	---	4.84	---	---	74.0	54.0	---
12060.0000	V	---	---	4.84	---	---	74.0	54.0	---
14472.0000	H	---	---	9.35	---	---	74.0	54.0	---
14472.0000	V	---	---	9.35	---	---	74.0	54.0	---

Note :

1. Item of margin shown in above table refer to average limit.
2. Remark “---” means that the emissions level is too low to be measured.
3. If the peak result is under the average limit, that is deemed to meet the average limit.
4. If there is only peak result, item “Margin” referred to “peak result – average limit”.
5. The radiation emissions have been measured to beyond the tenth harmonic of the fundamental frequency and show the significant frequencies, other means the value is too low to be detected.

b) Channel 6

Fundamental Frequency: 2437 MHz

Frequency (MHz)	Ant Pol H/V	Reading (dBuV/m)@3m		Correct Factor (dB)	Result (dBuV/m)@3m		Limit (dBuV/m)@3m		Margin (worse) (dB)
		Peak	AVG		Peak	AVG	Peak	AVG	
4874.0000	H	54.2	37.2	-1.88	52.3	35.3	74.0	54.0	-18.7
4874.0000	V	56.0	38.2	-1.88	54.1	36.3	74.0	54.0	-17.7
7311.0000	H	---	---	1.15	---	---	74.0	54.0	---
7311.0000	V	---	---	1.15	---	---	74.0	54.0	---
9748.0000	H	---	---	2.65	---	---	74.0	54.0	---
9748.0000	V	49.9	37.5	2.65	52.6	40.2	74.0	54.0	-13.8
12185.0000	H	---	---	4.91	---	---	74.0	54.0	---
12185.0000	V	---	---	4.91	---	---	74.0	54.0	---
14622.0000	H	---	---	8.68	---	---	74.0	54.0	---
14622.0000	V	---	---	8.68	---	---	74.0	54.0	---

Note :

1. Item of margin shown in above table refer to average limit.
2. Remark “---” means that the emissions level is too low to be measured.
3. If the peak result is under the average limit, that is deemed to meet the average limit.
4. If there is only peak result, item “Margin” referred to “peak result – average limit”.
5. The radiation emissions have been measured to beyond the tenth harmonic of the fundamental frequency and show the significant frequencies, other means the value is too low to be detected.

c) Channel 11

Fundamental Frequency: 2462 MHz

Frequency (MHz)	Ant Pol H/V	Reading (dBuV/m)@3m		Correct Factor (dB)	Result (dBuV/m)@3m		Limit (dBuV/m)@3m		Margin (worse) (dB)
		Peak	AVG		Peak	AVG	Peak	AVG	
4924.0000	H	53.3	35.5	-1.77	51.5	33.7	74.0	54.0	-20.3
4924.0000	V	55.4	38.2	-1.77	53.6	36.4	74.0	54.0	-17.6
7386.0000	H	---	---	1.33	---	---	74.0	54.0	---
7386.0000	V	---	---	1.33	---	---	74.0	54.0	---
9848.0000	H	---	---	2.75	---	---	74.0	54.0	---
9848.0000	V	49.1	41.4	2.75	51.9	44.2	74.0	54.0	-9.8
12310.0000	H	---	---	4.99	---	---	74.0	54.0	---
12310.0000	V	---	---	4.99	---	---	74.0	54.0	---
14772.0000	H	---	---	7.93	---	---	74.0	54.0	---
14772.0000	V	---	---	7.93	---	---	74.0	54.0	---

Note :

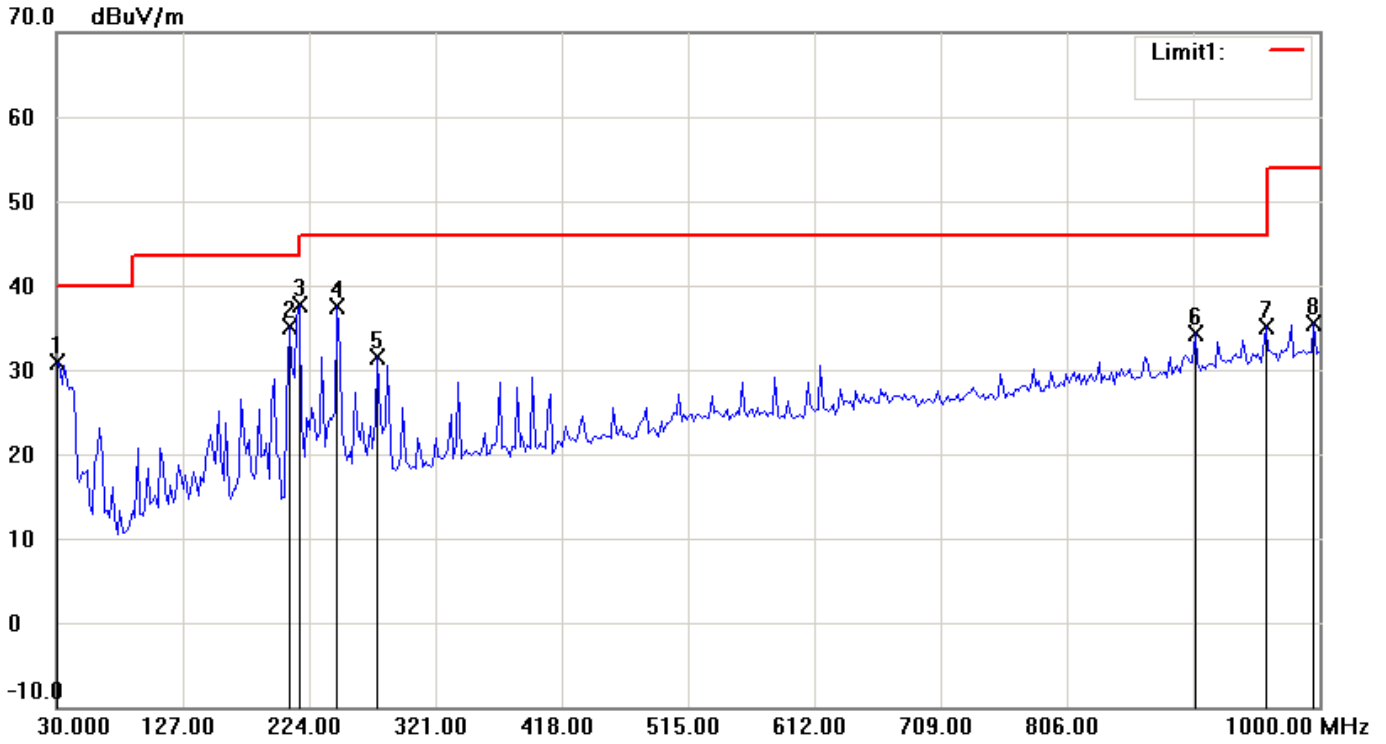
1. Item of margin shown in above table refer to average limit.
2. Remark “---” means that the emissions level is too low to be measured.
3. If the peak result is under the average limit, that is deemed to meet the average limit.
4. If there is only peak result, item “Margin” referred to “peak result – average limit”.
5. The radiation emissions have been measured to beyond the tenth harmonic of the fundamental frequency and show the significant frequencies, other means the value is too low to be detected.

6.4.2 Spurious Emission

Operation Mode: Tx

6.4.2.1 Emission frequencies below 1 GHz

File: FT0044C_B Data: #1 Date: 2014/4/23 Temperature: 22 °C
Time: PM 06:41:14 Humidity: 59 %



Condition: FCC Part15 RE-Class B_30-1000MHz Polarization: Horizontal
EUT: Distance: 3m
Model:
Test Mode:

No.	Frequency (MHz)	Reading (dBuV/m)	Detector	Corrected dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)
1	31.9438	11.54	peak	19.39	30.93	40.00	-9.07
2	208.8377	20.00	peak	15.04	35.04	43.50	-8.46
3	216.6132	23.25	peak	14.51	37.76	46.00	-8.24
4	245.7715	21.64	peak	15.84	37.48	46.00	-8.52
5	276.8735	14.18	peak	17.24	31.42	46.00	-14.58
6	904.7495	5.97	peak	28.36	34.33	46.00	-11.67
7	959.1784	5.38	peak	29.73	35.11	46.00	-10.89
8	996.1122	5.35	peak	30.18	35.53	54.00	-18.47

File: FT0044C_B

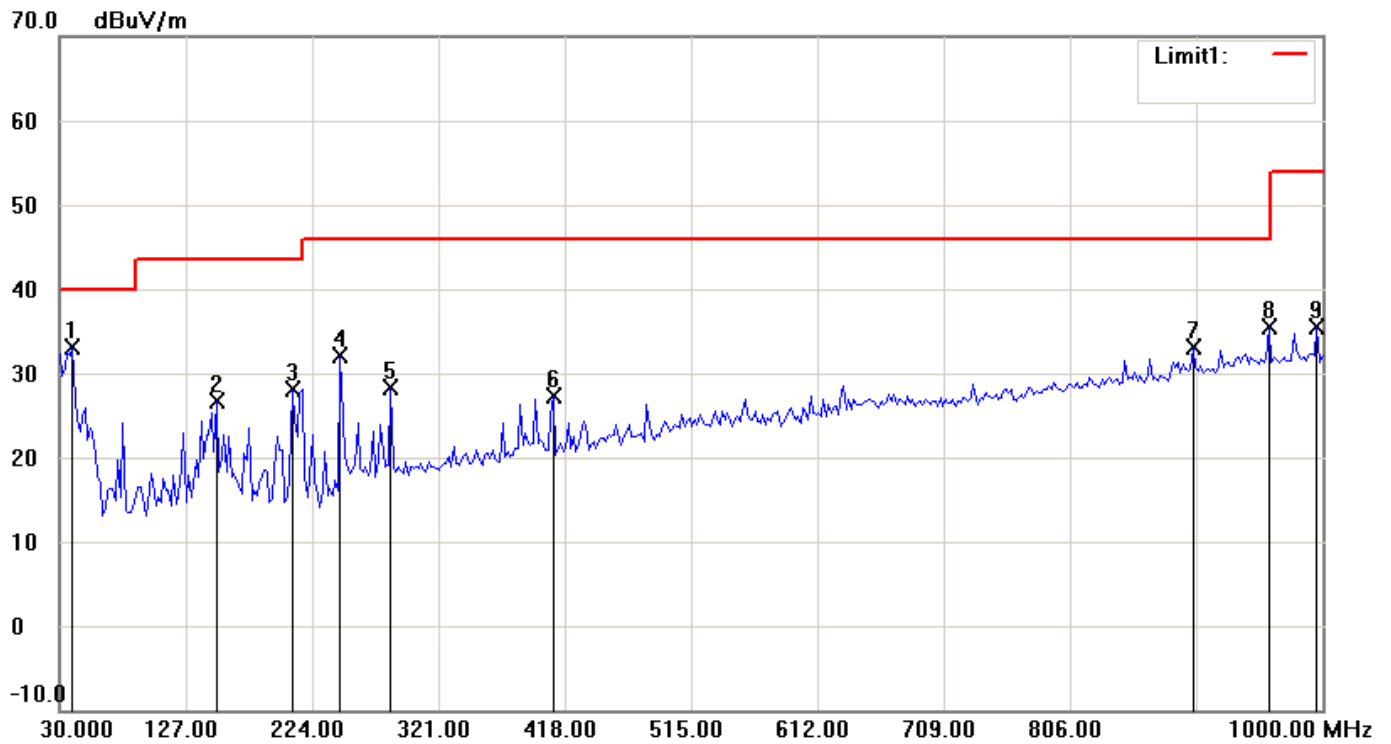
Data: #2

Date: 2014/4/23

Temperature: 22 °C

Time: PM 06:45:44

Humidity: 59 %



Condition: FCC Part15 RE-Class B_30-1000MHz

Polarization: Vertical

EUT:

Distance: 3m

Model:

Test Mode:

No.	Frequency (MHz)	Reading (dBuV/m)	Detector	Corrected dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)
1	39.7194	17.55	peak	15.51	33.06	40.00	-6.94
2	150.5210	12.65	peak	14.07	26.72	43.50	-16.78
3	208.8377	13.11	peak	15.04	28.15	43.50	-15.35
4	245.7715	16.31	peak	15.84	32.15	46.00	-13.85
5	284.6492	10.79	peak	17.54	28.33	46.00	-17.67
6	409.0581	6.73	peak	20.66	27.39	46.00	-18.61
7	900.8617	4.80	peak	28.25	33.05	46.00	-12.95
8	959.1784	5.78	peak	29.73	35.51	46.00	-6.49
9	996.1122	5.39	peak	30.18	35.57	54.00	-18.43

6.4.2.2 Emission frequencies above 1 GHz

6.4.2.2.1 IEEE 802.11b

6.4.2.2.1.1 Fundamental Frequency: 2412 MHz

Frequency (MHz)	Ant Pol	Reading (dBuV/m)@3m		Correct Factor (dB)	Result (dBuV/m)@3m		Limit (dBuV/m)@3m		Margin (worse) (dB)
		Peak	AVG		Peak	AVG	Peak	AVG	
1067.3077	V	51.3	---	-14.06	37.2	---	74	54	-16.8
1105.4486	V	49.5	---	-13.87	35.6	---	74	54	-18.4
1433.0127	H	49.1	---	-12.24	36.9	---	74	54	-17.1
1545.1922	H	48.3	---	-11.66	36.6	---	74	54	-17.4

6.4.2.2.1.2 Fundamental Frequency: 2437 MHz

Frequency (MHz)	Ant Pol	Reading (dBuV/m)@3m		Correct Factor (dB)	Result (dBuV/m)@3m		Limit (dBuV/m)@3m		Margin (worse) (dB)
		Peak	AVG		Peak	AVG	Peak	AVG	
1031.4103	V	50.1	---	-14.24	35.9	---	74	54	-18.1
1067.3077	H	49.8	---	-14.06	35.7	---	74	54	-18.3
1067.3077	V	52.1	---	-14.06	38.0	---	74	54	-16.0
1886.2190	H	48.2	---	-9.89	38.3	---	74	54	-15.7
2162.1795	V	48.3	---	-8.75	39.6	---	74	54	-14.4
2856.4927	V	48.3	---	-6.32	42.0	---	74	54	-12.0
3453.2813	H	49.1	---	-4.53	44.6	---	74	54	-9.4

6.4.2.2.1.3 Fundamental Frequency: 2462 MHz

Frequency (MHz)	Ant Pol	Reading (dBuV/m)@3m		Correct Factor (dB)	Result (dBuV/m)@3m		Limit (dBuV/m)@3m		Margin (worse) (dB)
		Peak	AVG		Peak	AVG	Peak	AVG	
1031.4103	V	49.1	---	-14.24	34.9	---	74	54	-19.1
1065.0641	H	48.8	---	-14.07	34.7	---	74	54	-19.3
1069.5513	V	52.2	---	-14.05	38.2	---	74	54	-15.8
1204.1666	H	48.2	---	-13.38	34.8	---	74	54	-19.2
1892.9486	V	48.8	---	-9.86	38.9	---	74	54	-15.1
10714.2075	V	46.5	---	3.90	50.4	---	74	54	-3.6

Note: 1. Place of Measurement: Measuring site of the ETC.

2. Item of margin shown in above table refer to average limit.
3. Remark “---” means that the emissions level is too low to be measured.
4. If the peak result is under the average limit, that is deemed to meet the average limit.
5. If there is only peak result, item “Margin” referred to “peak result – average limit”.
6. The radiation emissions have been measured to beyond the tenth harmonic of the fundamental frequency and show the significant frequencies, other means the value is too low to be detected.
7. The estimated measurement uncertainty of the result measurement is
 - ±4.2dB (9kHz ≤ f ≤ 30MHz)
 - ±4.6dB (30MHz ≤ f < 300MHz).
 - ±4.4dB (300MHz ≤ f < 1000MHz).
 - ±2.9dB (1GHz ≤ f < 18GHz).
 - ±3.5dB (18GHz ≤ f ≤ 40GHz).

6.4.2.2.2 IEEE 802.11g

6.4.2.2.2.1 Fundamental Frequency: 2412 MHz

Frequency (MHz)	Ant Pol H/V	Reading (dBuV/m)@3m		Correct Factor (dB)	Result (dBuV/m)@3m		Limit (dBuV/m)@3m		Margin (worse) (dB)
		Peak	AVG		Peak	AVG	Peak	AVG	
1031.4103	H	48.1	---	-14.24	33.9	---	74	54	-20.1
1031.4103	V	49.5	---	-14.24	35.3	---	74	54	-18.7
1067.3077	V	50.8	---	-14.06	36.7	---	74	54	-17.3
1087.5000	V	49.6	---	-13.95	35.7	---	74	54	-18.3
1890.7050	H	46.7	---	-9.87	36.8	---	74	54	-17.2

6.4.2.2.2.2 Fundamental Frequency: 2437 MHz

Frequency (MHz)	Ant Pol H/V	Reading (dBuV/m)@3m		Correct Factor (dB)	Result (dBuV/m)@3m		Limit (dBuV/m)@3m		Margin (worse) (dB)
		Peak	AVG		Peak	AVG	Peak	AVG	
1031.4103	V	49.6	---	-14.24	35.4	---	74	54	-18.6
1067.3077	V	51.3	---	-14.06	37.2	---	74	54	-16.8
1085.2563	H	48.9	---	-13.98	34.9	---	74	54	-19.1
1150.3205	V	49.4	---	-13.65	35.8	---	74	54	-18.2
1385.8974	H	48.2	---	-12.48	35.7	---	74	54	-18.3
3130.0207	H	47.3	---	-5.43	41.9	---	74	54	-12.1
9968.2220	V	47.2	---	2.87	50.1	---	74	54	-3.9

6.4.2.2.2.3 Fundamental Frequency: 2462 MHz

Frequency (MHz)	Ant Pol H/V	Reading (dBuV/m)@3m		Correct Factor (dB)	Result (dBuV/m)@3m		Limit (dBuV/m)@3m		Margin (worse) (dB)
		Peak	AVG		Peak	AVG	Peak	AVG	
1031.4103	V	50.0	---	-14.24	35.8	---	74	54	-18.2
1067.3077	V	50.3	---	-14.06	36.2	---	74	54	-17.8
1204.1666	H	48.6	---	-13.38	35.2	---	74	54	-18.8
1482.3717	V	48.7	---	-11.99	36.7	---	74	54	-17.3
2806.7604	H	46.7	---	-6.50	40.2	---	74	54	-13.8
4323.5977	H	46.5	---	-2.63	43.9	---	74	54	-10.1

Note:

1. Place of Measurement: Measuring site of the ETC.
2. Item of margin shown in above table refer to average limit.
3. Remark “---” means that the emissions level is too low to be measured.
4. If the peak result is under the average limit, that is deemed to meet the average limit.
5. If there is only peak result, item “Margin” referred to “peak result – average limit”.
6. The radiation emissions have been measured to beyond the tenth harmonic of the fundamental frequency and show the significant frequencies, other means the value is too low to be detected.
7. The estimated measurement uncertainty of the result measurement is
 - ±4.6dB (30MHz ≤ f < 300MHz).
 - ±4.4dB (300MHz ≤ f < 1000MHz).
 - ±4.1dB (1GHz ≤ f ≤ 18GHz).
 - ±4.4dB (18GHz < f ≤ 40GHz).

6.4.2.2.3 IEEE 802.11gn, HT20

6.4.2.2.3.1 Fundamental Frequency: 2412 MHz

Frequency (MHz)	Ant Pol H/V	Reading (dBuV/m)@3m		Correct Factor (dB)	Result (dBuV/m)@3m		Limit (dBuV/m)@3m		Margin (worse) (dB)
		Peak	AVG		Peak	AVG	Peak	AVG	
1031.4103	H	48.7	---	-14.24	34.5	---	74	54	-19.5
1067.3077	V	50.6	---	-14.06	36.5	---	74	54	-17.5
1087.5000	V	49.9	---	-13.95	36.0	---	74	54	-18.0
1105.4485	V	51.2	---	-13.87	37.3	---	74	54	-16.7
1325.3205	H	48.3	---	-12.77	35.5	---	74	54	-18.5
1881.7308	H	48	---	-9.92	38.1	---	74	54	-15.9
3328.9502	V	48.1	---	-4.88	43.2	---	74	54	-10.8

6.4.2.2.3.2 Fundamental Frequency: 2437 MHz

Frequency (MHz)	Ant Pol H/V	Reading (dBuV/m)@3m		Correct Factor (dB)	Result (dBuV/m)@3m		Limit (dBuV/m)@3m		Margin (worse) (dB)
		Peak	AVG		Peak	AVG	Peak	AVG	
1024.6793	V	49.5	---	-14.28	35.2	---	74	54	-18.8
1067.3077	H	48.1	---	-14.06	34.0	---	74	54	-20.0
1067.3077	V	50.4	---	-14.06	36.3	---	74	54	-17.7
1087.5000	V	50.4	---	-13.95	36.5	---	74	54	-17.5
1105.4485	V	50.2	---	-13.87	36.3	---	74	54	-17.7
1428.5255	H	48.1	---	-12.26	35.8	---	74	54	-18.2
9396.2996	H	46.3	---	2.46	48.8	---	74	54	-5.2

6.4.2.2.3.3 Fundamental Frequency: 2462 MHz

Frequency (MHz)	Ant Pol H/V	Reading (dBuV/m)@3m		Correct Factor (dB)	Result (dBuV/m)@3m		Limit (dBuV/m)@3m		Margin (worse) (dB)
		Peak	AVG		Peak	AVG	Peak	AVG	
1026.9230	V	49.4	---	-14.26	35.1	---	74	54	-18.9
1067.3077	V	50.9	---	-14.06	36.8	---	74	54	-17.2
1087.5000	V	49.6	---	-13.95	35.7	---	74	54	-18.3
1150.3205	V	49.6	---	-13.65	36.0	---	74	54	-18.0
1421.7950	H	48.2	---	-12.29	35.9	---	74	54	-18.1
2043.2691	H	46.8	---	-9.15	37.7	---	74	54	-16.3
2856.4927	V	48.1	---	-6.32	41.8	---	74	54	-12.2
3453.2081	H	49.4	---	-4.53	44.9	---	74	54	-9.1

Note:

1. Place of Measurement: Measuring site of the ETC.
2. Item of margin shown in above table refer to average limit.
3. Remark “---” means that the emissions level is too low to be measured.
4. If the peak result is under the average limit, that is deemed to meet the average limit.
5. If there is only peak result, item “Margin” referred to “peak result – average limit”.
6. The radiation emissions have been measured to beyond the tenth harmonic of the fundamental frequency and show the significant frequencies, other means the value is too low to be detected.
7. The estimated measurement uncertainty of the result measurement is
 - ±4.6dB (30MHz ≤ f < 300MHz).
 - ±4.4dB (300MHz ≤ f < 1000MHz).
 - ±4.1dB (1GHz ≤ f ≤ 18GHz).
 - ±4.4dB (18GHz < f ≤ 40GHz).

6.4.3 Radiated Measurement at Bandedge with Fundamental Frequencies and co-location

Test Date: Apr. 23, 2014

Temperature: 22°C

Humidity: 59%

6.4.3.1 Operation Mode: Tx

6.4.3.1.1 IEEE 802.11b

Operation Channel	Frequenc	Reading @3m (dBuV/m)				Factor	Result		Limit @3m		Margin (worse)	
		H		V			(dBuV/m)		(dBuV/m)		(dB)	
	(MHz)	Peak	Ave	Peak	Ave	(dB)	Peak	Ave	Peak	Ave	Peak	Ave
Low	2390.000	34.6	13.6	35.9	13.0	29.8	65.7	43.4	74	54	-8.3	-10.6
High	2483.500	29.1	13.3	34.9	13.6	29.8	64.7	43.4	74	54	-9.3	-10.6

6.4.3.1.2 IEEE 802.11g

Operation Channel	Frequenc	Reading @3m (dBuV/m)				Factor	Result		Limit @3m		Margin (worse)	
		H		V			(dBuV/m)		(dBuV/m)		(dB)	
	(MHz)	Peak	Ave	Peak	Ave	(dB)	Peak	Ave	Peak	Ave	Peak	Ave
Low	2390.000	35.9	18.0	33.9	16.5	29.8	65.7	47.8	74	54	-8.3	-6.2
High	2483.500	34.9	15.4	37.5	16.5	29.8	67.3	46.3	74	54	-6.7	-7.7

6.4.3.1.3 IEEE 802.11gn, HT20

Operation Channel	Frequenc	Reading @3m (dBuV/m)				Factor	Result		Limit @3m		Margin (worse)	
		H		V			(dBuV/m)		(dBuV/m)		(dB)	
	(MHz)	Peak	Ave	Peak	Ave	(dB)	Peak	Ave	Peak	Ave	Peak	Ave
Low	2390.000	39.6	18.4	37.4	18.0	29.8	69.4	48.2	74	54	-4.6	-5.8
High	2483.500	38.2	18.2	39.1	18.1	29.8	68.9	48.0	74	54	-5.1	-6.0

Note :1. Remark “---” means that the emissions level is too low to be measured.

2. The result is the highest value of radiated emission from restrict band of 2310 ~ 2390 MHz and 2483.5 ~ 2500 MHz.

6.5 Field Strength Calculation

The field strength is calculated by adding the Antenna Factor, High Pass Filter Loss(if used) and Cable Loss, and subtracting the Amplifier Gain (if any) from the measured reading. The basic equation calculation is as follows:

$$Result = Reading + Corrected Factor$$

where

$$Corrected Factor = Antenna Factor + Cable Loss + High Pass Filter Loss - Amplifier Gain$$

7 OUTPUT POWER MEASUREMENT

7.1 Standard Applicable

For direct sequence system, according to 15.247(b), the maximum peak output power of the transmitter shall not exceed 1 Watt. If transmitting antennas of directional gain greater than 6 dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

7.2 Measurement Procedure

1. The test is performed in accordance with FCC KDB Publication No. 558074: Guidance on Measurements for Digital Transmission Systems (47 CFR 15.247)
2. Position the EUT as shown in figure 3.

Figure 3: Output Power measurement configuration.



7.3 Measurement Equipment

Equipment	Manufacturer	Model No.
Power Meter	Agilent	N1912A
Wideband Power Sensor	Agilent	N1922A

7.4 Measurement Data

7.4.1 IEEE 802.11b

Test Date: Jun. 11, 2014Temperature: 20°CHumidity: 54%

Channel	Maximum Peak Output Power (dBm)	FCC Limit (dBm)	Chart
L	15.50	30.0	-
M	15.65	30.0	-
H	15.80	30.0	-

Note:

The estimated measurement uncertainty of the result measurement is $\pm 1.5\text{dB}$ ($1\text{GHz} \leq f \leq 18\text{GHz}$)

7.4.2 IEEE 802.11gTest Date: Jun. 11, 2014Temperature: 20°CHumidity: 54

Channel	Maximum Peak Output Power (dBm)	FCC Limit (dBm)	Chart
L	19.78	30.0	-
M	20.00	30.0	-
H	20.32	30.0	-

Note:

The estimated measurement uncertainty of the result measurement is $\pm 1.5\text{dB}$ ($1\text{GHz} \leq f \leq 18\text{GHz}$)

7.4.3 IEEE 802.11gn, HT20Test Date: Jun. 11, 2014Temperature: 20°CHumidity: 54

Channel	Maximum Peak Output Power (dBm)	FCC Limit (dBm)	Chart
L	19.80	30.0	-
M	19.94	30.0	-
H	20.29	30.0	-

Note:

The estimated measurement uncertainty of the result measurement is $\pm 1.5\text{dB}$ ($1\text{GHz} \leq f \leq 18\text{GHz}$)

8. EQUIPMENTS LIST FOR TESTING

Equipment	Manufacturer	Model No.	S/N	Calibration Date	Next Cal. Due
EMI Receiver	R&S	ESIB 7	13054414-001	07/11/2013	07/10/2014
Spectrum Analyzer	Rohde & Schwarz	FSU46	13040904-001	01/20/2014	01/19/2015
Horn Antenna	EMCO	3115	13059201-001	07/22/2013	07/21/2014
BiLog Antenna	ETC	MCTD2786	BL09D01004	02/07/2014	02/06/2015
Hom Antenna	EMCO	3116	13059202-001	08/22/2013	08/21/2014
PRE-Amplifier	Agilent	8449B	13040709-001	11/26/2013	11/25/2014
Loop Antenna	EMCO	6512	13054104-001	06/04/2013	06/03/2014
PRE-Amplifier	EMCI	PA303N	13040720-001	06/10/2013	06/09/2014
Power Meter	Agilent	N1922A	13053523-001	11/23/2013	11/22/2014
Peak Power Sensor	Agilent	N1912A	13050625-001	11/23/2013	11/22/2014